



THE MOST ADVANCED NAME IN DRAINAGE SYSTEMS



**RE: TESTING OF (3) SAMPLES OF WOOSTER 375 MM (15")  
DIAMETER SMOOTHWALL TYPE 'S' POLYETHYLENE PIPE TO  
AASHTO M294M-04 FOR THE ESC PROGRAM**

CONDITIONING: Not less than 40 hours at  $23 \pm 2^{\circ}\text{C}$  (73° F)

TEST RESULTS:

**SECTION 6.1 BASIC MATERIALS**

Results:

SAMPLE	DENSITY (g/cm <sup>3</sup> )	MELT INDEX (g/10 minutes)	CARBON
TRI/ENVIRONMENTAL	.952	.24	2.88
ADS	.951	.22	2.60

SPECIFICATION: Minimum Cell Class 335400C and SP- NCTL 15% 24 hours

Density .948 to .955 g/cm<sup>3</sup>

Melt index .15 to .40 g/10 min.

Carbon Black Content 2% minimum / 5% Maximum

\*Compounds that have a higher cell classification in one or more properties with the exception of density are acceptable provided product requirements are met.

CONCLUSION: Specification is met.

**SECTION 7.1 WORKMANSHIP**

SAMPLE	RESULTS
TRI/ENVIRONMENTAL	Pass
ADS	Pass

SPECIFICATION: Free of foreign inclusions and visible defects. Inner liner shall be fused to outer corrugated wall at all internal corrugation crests.

CONCLUSION: Specification is met.

**SECTION 7.2 PIPE DIMENSIONS**  
**SECTION 7.2.2 WALL THICKNESS**

SAMPLE	INNER WALL THICKNESS
TRI/ENVIRONMENTAL	0.067"
ADS	0.058"

SPECIFICATION: The minimum inner wall thickness requirement is 1.0mm (0.039")

CONCLUSION: Specification is met.

**SECTION 7.2.3 INSIDE DIAMETER**

SAMPLE	INSIDE DIAMETER
TRI/ENVIRONMENTAL	14.90"
ADS	14.91"

SPECIFICATION: Nominal inside diameter shall not exceed 4.5% oversize of 1.5% undersize and not more than 30mm oversize 369.3 mm / 391.8 mm (14.54" / 15.43")

CONCLUSION: Specification is met.

**SECTION 7.4 PIPE STIFFNESS**

Sample No.	Orientation	Pipe Stiffness kPa (PSI)
TRI/ENVIRONMENTAL	0 / 45 / 90	50 / 51 / 49
ADS	0 / 45 / 90	50 / 52 / 50

SPECIFICATION: The minimum pipe stiffness requirement at 5% deflection is 290 kPa. (42 PSI)

CONCLUSION: Specification is met.

## **SECTION 7.5 PIPE AND FITTINGS**

SAMPLE	RESULTS
TRI/ENVIRONMENTAL	PASS
ADS	PASS

SPECIFICATION: No evidence of buckling, cracking, splitting or delamination when the vertical inside diameter is reduced by 20%

CONCLUSION: Specification is met.

## **SECTION 7.6 ENVIRONMENTAL STRESS CRACKING**

Sample	Results
TRI/ ENVIRONMENTAL	PASS
ADS	PASS

SPECIFICATION: There shall be no cracking of the pipe

CONCLUSION: Specification is met.

## **SECTION 7.7 BRITTLENESS**

Sample	Results
TRI/ ENVIRONMENTAL	PASS
ADS	PASS

SPECIFICATION: The pipe specimens shall not crack or split.  
Five non-failure out of six impacts will be acceptable.

CONCLUSION: Specification is met.

## **SECTION 7.8 FITTING REQUIREMENTS**

Sample	Results
TRI/ ENVIRONMENTAL	PASS
ADS	PASS

SPECIFICATIONS: Pipe connections shall not separate to create a gap exceeding 5mm.(0.197”) when measure between the bell and spigot portions of pipe fittings shall not crack or delaminate

CONCLUSION: Specification is met.

## **SECTION 11 MARKING**

SAMPLE	MFG	SIZE	PLANT CODE	PRODUCTION DATE
TRI/ ENVIRONMENTAL	ADS	15" 375mm	S (WOOSTER)	N/A
ADS	ADS	15" 375mm	S (WOOSTER)	4/19/05

SPECIFICATION: Pipe and fitting shall be marked at intervals not more than 3.5mm, manufacture's name or trademark, nominal size, AASHTO M294, plant code and date of manufacture of appropriated code.

CONCLUSION: Specification is met.

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